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BAYER MATERIAL SCIENCE LLC
100 BAYER ROAD
PITTSBURGH, PA 15205

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/928,853
Filing Date: August 13, 2001
Appellant(s): MELCHIORS ET AL.

Joseph C. Gil
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 9, 2006 appealing from the Office action mailed June 28, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. 5,126,393	Blum et al.	6-1992
EP 0159117 B1	Hughes et al.	1-1993

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum et al. ('393) in view of EP 159117.

Blum et al. disclose water dispersible binder compositions comprising a urethane modified polyester polyol, derived from reactants that overlap those of appellants, and a blocked polyisocyanate component. The urethane modified polyester resin is disclosed as being derived from the reaction of a polyester polyol, a 2,2-bis-(hydroxymethyl)-alkane carboxylic acid (this compound yields appellants' claimed hydrophilic groups of appellants' component A), and a cycloaliphatic diisocyanate (the reaction of this diisocyanate with the polyester polyol and the 2,2-bis-(hydroxymethyl)-alkane carboxylic acid yields appellants' claimed urethane groups of appellants' component A). See abstract and columns 3-6. Furthermore, though Blum et al. fails to specifically recite a molar ratio of blocked NCO groups of the crosslinker to NCO-reactive groups of the urethane modified polyester polyol, this ratio can be calculated using the molecular weight and hydroxyl value data for the polyol disclosed by Blum et al., the species of diisocyanates and blocking agents disclosed by Blum et al., and the percent composition of the binder set forth at column 2, lines 20-22 of Blum et al. For example, using an average molecular weight value of 18,750 from the preferred molecular weight range of the urethane modified polyester polyol (column 3, line 39), an average hydroxyl value of 80 from the preferred hydroxyl value range of the urethane modified polyester polyol (column 3, line 41), an OH

functionality of 26.7 is calculated from the equation f=[18750*80]/56100. Given the aforementioned percent composition for the binder within column 2, a molar content of OH groups of 0.093-0.135 is calculated. Furthermore, selecting, for calculation purposes, a caprolactam blocked hexamethylene diisocyanate having a molecular weight of 396 g/mol (column 6, lines 31 and 53), and again using the aforementioned percent composition for the binder within column 2, a molar content of blocked isocyanate groups of 0.025-0.177 is calculated. The contents of the blocked isocyanate groups and the OH groups ultimately leads to a molar range of blocked isocyanates groups to NCO-reactive groups of 0.2:1 to 1.9:1. This calculated range is within appellants' claimed range of 0.2:1 to 5:1. Lastly, appellants claim that the polyisocyanate (component B) is added to the polyol (component A) before conversion thereof to the aqueous phase; this limitation is met by the disclosure within Blum et al. at column 7, lines 16-19. Here Blum et al. states, "The binder compositions according to the invention or aqueous dispersions prepared therefrom may be prepared simply by mixing the individual components a), b), and c)". It is noted that a) corresponds to appellants' component A and that b) corresponds to appellants' component B. The position is taken that the language of column 7, lines 16-19 unambiguously establishes that a) and b) may be mixed before water is introduced to form the dispersion; the language, "or aqueous dispersions prepared therefrom", clearly indicates that the language, "The binder compositions", refers to undispersed compositions that comprise a), b), and c). It is not seen that any other interpretation of the language is reasonable.

Though Blum et al. disclose numerous blocking agents for masking the polyisocyanate, patentees are silent regarding the use of pyrazole blocking agents. Still, the use of pyrazoles as

blocking agents for polyisocyanates that are to be incorporated into aqueous compositions in masked form was known at the time of invention. This position is supported by the teachings of EP 159117 at page 4, lines 4+. Additionally, the secondary reference discloses that a benefit of using the pyrazole blocking agents is that the deblocking temperature is significantly lower as compared to the deblocking temperature of other conventional blocking agents. Since lower deblocking temperatures require less energy input and, therefore, require less expense, the position is taken that it would have been obvious to utilize the pyrazole blocking agents within the primary reference, so as to obtain a coating system that is less expensive to apply.

Appellants have argued that the sentence within column 7, lines 16-19, referred to by the examiner as supporting the position that the ingredients can be mixed in any order, is only one sentence in a disclosure which is otherwise completely directed to methods of creating a composition in which the crosslinker is added after creation of the dispersion. Appellants state that one skilled in the art would not interpret the cited sentence in the manner suggested by the examiner, based on the reading of the patent as whole. Appellants further argue that the sentence has been taken out of context and that this single sentence, in view of the teachings of the reference, is not a proper foundation for a 35 USC 103 rejection. In response and further in view of the aforementioned position taken with respect to the argued sentence within column 7, lines 16-19, while Blum et al. do disclose an embodiment where the crosslinker is added after the dispersion has been created, it cannot be said that Blum et al. exclusively require that the crosslinker be added after formation of the aqueous dispersion, and for this reason, it is not seen that appellants' claims are distinguished from the prior art in the manner argued by appellants. Furthermore, appellants' argument that the aforementioned sentence has been taken out of

context is not well-taken. In fact, it is not seen how the sentence could be taken out of context, because it's meaning is seemingly quite clear on its face. The argued sentence simply discloses an alternative embodiment of the disclosed invention. It has been held that a reference is good for all that it teaches, and the position is taken that this premise applies to alternative embodiments. *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983). *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989) (MPEP 2123). Given the situation at hand, it is not seen that appellants' relied upon court decisions have been properly applied. Contrary to appellants' arguments, the examiner has not picked and chosen only what will support the examiner's position. The examiner has simply relied upon the teaching of an alternative embodiment. In summation, appellants have not set forth a convincing argument why this teaching should be dismissed.

Appellants have further argued that the examiner has incorrectly interpreted Hughes et al. Appellants argue that Hughes et al. at page 4, lines 4-5 indicates that Hughes et al. shows addition of the blocked crosslinker after the creation of the dispersion, not before, as asserted in the Office action. In response, applicants have read more into the reference and the Office action than is actually set forth. Firstly, the examiner has not suggested that Hughes et al. teaches addition of the crosslinker prior to dispersion. Rather, the examiner has stated with respect to Hughes et al. that the use of pyrazoles as blocking agents for polyisocyanates that are to be incorporated into aqueous compositions in masked form was known at the time of invention. This statement does not suggest when such incorporation occurs; therefore, appellants' criticism of the examiner's position is not well founded. Secondly, the examiner finds no support within Hughes et al. for appellants' statement that Hughes et al. shows addition of the blocked

crosslinker after the creation of the dispersion; the langauge, "which is to be crosslinked by the polyisocyanate", sets forth nothing that would suggest when the polyisocyanate is added; the language merely states that it is the polyisocyanate that performs the function of crosslinking.

Lastly, in response to the examiner's criticism (reiterated below) of the data supplied to rebut the *prima facie* case of obviousness, appellants have argued that the data set forth within the specification and the 37 CFR 1.132 declarations filed July 1, 2004, March 21, 2005, November 15, 2005, and April 10, 2006 are representative of the relied upon prior art and are commensurate in scope with the presently claimed invention. Appellants argue that the examples in the application show use of aliphatic polycarbonate polyesters, the first declaration shows use of polyester polyol and aliphatic polyisocyanate, and the second/third declarations show use of aromatic polyisocyanates in combination with linear aliphatic polyethers. Therefore, applicants argue that both aliphatic and aromatic isocyanates have been demonstrated and that polycarbonate, polyester, and polyether polyols have been shown. In response, appellants' characterization of the showings within the application and declarations is misleading. Firstly, despite appellants' statement, the second/third declarations do not show use of aromatic polyisocyanates with polyethers; the second/third declarations actually show three different examples; the second declaration shows an example of an aromatic isocyanate used with a polyester polyol and an example of an aliphatic isocyanate used with a polyether polyol, and the third declaration shows an example of an aromatic isocyanate used with a polyester polyol, where the blocking agent differs from the blocking agent used in the corresponding example of the second declaration, and an example of an aliphatic isocyanate used with a polyether polyol, wherein this example appears to be identical to the corresponding example in

the second declaration. Accordingly, overall, the only showings provided are limited ones where aliphatic or aromatic isocyanates are used with specific polyesters and aliphatic isocyanates are used with specific polyethers. Given the breadth of applicants' claims, it is not seen that the examples of the declarations exemplifying appellants' invention are commensurate in scope with the claims, in terms of component species or ratio of components. It has been held that the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. It has further been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. Secondly, with respect to the declarations, appellants' only example of a process wherein the blocked isocyanate is added to the aqueous dispersion appears in the declaration of July 1, 2004, and the position is taken that this example is not representative of the relied-upon prior art, namely Blum et al. Neither the polyester nor the diisocyanate reacted with the polyester to yield the urethane modified polyester of the example correspond to the teachings of the reference. The polyester of Blum et al. is derived from a monocarboxylic acid; however, the polyester of the comparative example of the declaration is not derived from such an acid. Furthermore, the diisocyanate used to produce the urethane modified polyester of Blum et al. is required to be a cycloaliphatic diisocyanate; however, the corresponding diisocyanate of the comparative example of the declaration is not a cycloaliphatic diisocyanate. Therefore, it is unclear that any meaningful comparison can be made between the comparative example and the prior art. It cannot be determined if the unsatisfactory results of the comparative example of the declaration are due to the difference in composition of the binder or the difference in sequence of addition of the components. Appellants further argue at page 11 of the Appeal Brief that Example D4 of the

present invention on page 17 is derived from reactants that are almost identical to those used in Example 1 of Blum et al. In response, it is not seen how this argument is relevant to the issues at hand. Firstly, the examiner has reviewed page 17 of the specification, and there is no reference to Example D4. The only Example D4 appears on pages 19 and 20 and Example D4 is incorporated within formulation A2 on page 28 of the specification. However, these examples are not comparative examples. Example D4 is formed by mixing the blocked isocyanate with the polyol prior to dispersion and is therefore an example of the instant invention; therefore, the relevance of this example as relating to a comparative example demonstrating unsatisfactory results is unclear. Secondly, despite appellants' statement, Example D4 is not representative of Blum et al., because it also lacks the monocarboxylic acid of Blum et al. Thirdly, a comparison of Example D4 (formulation A2) to Example 1 of Blum et al. is inconclusive, because both formulations, as set forth within their respective tables, appear to have satisfactory properties and do not reveal any unexpected results. Lastly, with respect to the 37 CFR 1.132 declaration of April 10, 2006, the declaration is not seen to be effective in dismissing or discounting what appears to be a clear teaching within the prior art. The examiner has previously set forth his rationale supporting why the primary reference is considered to teach that the crosslinking agent may be added prior to dispersion, and the remarks within the declaration are not seen to sway this rationale. The declaration further refers to the difficulty of dispersing blocked isocyanates in water. While the relevance of this position is not immediately clear, it is noted that Blum et al. teach at column 6, lines 12-17 that hydrophobic crosslinkers, which cannot be dispersed in water on their own, may be used, because the hydrophilic urethane-modified polyester resin can perform the function of an emulsifier. Accordingly, Blum et al. are considered to teach how to

disperse blocked isocyanates. In summation, it is not seen that appellants' showings set forth the unexpected results required to rebut the *prima facie* case of obviousness.

(10) Response to Argument

Appellants' arguments have been fully addressed within the **Grounds of Rejection**.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

RABON SERGENT
PRIMARY EXAMINER

Conferees:

APPEAL CONFEREE:

JENNIFER MICHENER
QUALITY ASSURANCE SPECIALIST